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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/674,755	11/03/2000	Manfred Tasto	P00,1814	3791
29177	7590	03/11/2004	EXAMINER	
BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135			LI, SHI K	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/674,755

Applicant(s)

TASTO ET AL.

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 17-18, 29, 33-34 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Lueker et al. (U.S. Patent 6,130,896).

Lueker et al. discloses in FIG. 1 a powerline based network and the general idea of having multiple access points (cordless communication devices) being connected to a power supply network. Lueker et al. further discloses in FIG. 6A and col. 4, lines 59-62 the placement of access points in cells for communication with untethered devices. Lueker et al. teaches to use an AN1000 chipset by Adaptive Networks for physical layer circuitry (see col. 3, line 50). The AN1000 chipset allows data communication at 100 kbps and supports broadband communication.

Regarding claim 18, Lueker et al. suggests the use of RF for wireless communication.

Regarding claim 29, Lueker et al. suggests the use of powerlines found in homes for connecting the access points. These powerlines are inherently of 110 volt in the United States.

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lueker et al. (U.S. Patent 6,130,896) in view of Hämmerling et al. (U.S. Patent 4,443,786).

Lueker et al. has been discussed above in regard to claims 17-18, 29, 33-34 and 37. The difference between Lueker et al. and the claimed invention is that Lueker et al. does not use infrared radiation for cordless transmission. However, Lueker et al. suggests that untethered device may communicate via optical signals (see col. 2, line 52). Hämmerling et al. teaches in FIG. 1 a communication system where a plurality of fixed modules are connected via the power line and communicate to movable modules via infra-red rays. One of ordinary skill in the art would have been motivated to combine the teaching of Hämmerling et al. with the powerline based network of Lueker et al. because RF signals interference with other devices and are regulated, therefore, their power and bandwidth are restricted while infrared wireless provides high bandwidth and long distance communication. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use infrared radiation for wireless communication, as taught by Hämmerling et al., in the powerline based network of Lueker et al. because RF signals interference with other devices and are regulated, therefore, their power and bandwidth are restricted while infrared wireless provides high bandwidth and long distance communication.

5. Claims 20 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lueker et al. and Hämmerling et al. as applied to claim 19 above, and further in view of Scifres (U.S. Patent 6,025,942).

Lueker et al. and Hämmerling et al. have been discussed above in regard to claim 19. Regarding claim 20, the difference between Lueker et al. and Hämmerling et al. and the claimed invention is that Lueker et al. and Hämmerling et al. do not specify the modulation technology used for the infrared rays. Scifres teaches in col. 2, lines 42 the use of amplitude modulation for adding the data to the infrared carrier. One of ordinary skill in the art would have been motivated to combine the teaching of Scifres with the modified powerline based network of Lueker et al. and Hämmerling et al. because amplitude modulation is simple to implement and easy to understand. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use amplitude modulation for adding data to the infrared carrier, as taught by Scifres, in the modified powerline based network of Lueker et al. and Hämmerling et al. because amplitude modulation is simple to implement and easy to understand.

Regarding claim 30, Scifres suggests in FIG. 2 to have the wireless modules in rooms.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lueker et al. (U.S. Patent 6,130,896) in view of Baum et al. (U.S. Patent 5,828,660).

Lueker et al. has been discussed above in regard to claims 17-18, 29, 33-34 and 37. The difference between Lueker et al. and the claimed invention is that Lueker et al. does not specify the modulation technologies. Baum et al. teaches in col. 2, lines 33-57 to use OFDM and OFDM-like digital modulation techniques to avoid interference and efficiently utilize bandwidth. One of ordinary skill in the art would have been motivated to combine the teaching of Baum et

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al. with the powerline based network of Lueker et al. because the method of Baum et al. avoids interference and efficiently utilizes bandwidth. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use digital modulation techniques such as OFDM and OFDM-like method of Baum et al. in the powerline based network of Lueker et al. because this method avoids interference and efficiently utilizes bandwidth.

7. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lueker et al. and Hämmerling et al. as applied to claim 19 above, and further in view of Sakanaka et al. (U.S. 5,680,241).

Lueker et al. and Hämmerling et al. have been discussed above in regard to claim 19. The difference between Lueker et al. and Hämmerling et al. and the claimed invention is that Lueker et al. and Hämmerling et al. do not specify the wavelengths used for the infrared carrier. Sakanaka et al. teaches in col. 4, lines 50-58 the choice of various wavelengths depending on the transmission distance and safety consideration. One of ordinary skill in the art would have motivated to combine the teaching of Sakanaka et al. with the modified powerline based network of Lueker et al. and Hämmerling et al. because choosing the right wavelength gives maximal safety or transmission distance. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to choose of wavelength in the range of 800 nm~1000 nm or 1200 nm~1400 nm, as taught by Sakanaka et al., in the modified powerline based network of Lueker et al. and Hämmerling et al. because choosing the right wavelength gives maximal safety or transmission distance.

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8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lueker et al. and Hämmerling et al. as applied to claim 19 above, and further in view of Farber et al. (U.S. Patent 5,969,837).

Lueker et al. and Hämmerling et al. have been discussed above in regard to claim 19. The difference between Lueker et al. and Hämmerling et al. and the claimed invention is that Lueker et al. and Hämmerling et al. do not use a surface-emitting semiconductor laser as the light emitter. Farber et al. teaches in col. 4, lines 30-31 the use of surface-emitting laser as the light source for wireless communication. One of ordinary skill in the art would have motivated to combine the teaching of Farber et al. with the modified powerline based network of Lueker et al. and Hämmerling et al. because surface-emitting laser is inexpensive, easy to drive yet has high output power. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use surface-emitting laser as light source, as taught by Sakanaka et al., in the modified powerline based network of Lueker et al. and Hämmerling et al. because surface-emitting laser is inexpensive, easy to drive yet has high output power.

9. Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lueker et al. (U.S. Patent 6,130,896) in view of Propp et al. (U.S. Patent 5,774,526).

Lueker et al. has been discussed above in regard to claims 17-18, 29, 33-34 and 37. The difference between Lueker et al. and the claimed invention is that Lueker et al. does not include a controller. Propp et al. teaches in FIG. 2 the inclusion of a controller 202 in a power line network. One of ordinary skill in the art would have been motivated to combine the teaching of Propp et al. with the communication system of Lueker et al. because a controller can be used to manage the network as described in col. 3, line 65-col.4, line 12. Thus it would have been

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obvious to one of ordinary skill in the art at the time the invention was made to include a controller, as taught by Propp et al., in the communication system of Lueker et al. because a controller can be used to manage the network.

Regarding claims 26-28, Propp et al. teaches in col. 5, lines 48-50 the connection between the controller and an external network via cable, microwave, radio-wave or optical link.

10. Claims 31-32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lueker et al. (U.S. Patent 6,130,896) in view of White et al. (U.S. Patent 6,400,968 B1).

Lueker et al. has been discussed above in regard to claims 17-18, 29, 33-34 and 37. The difference between Lueker et al. and the claimed invention is that Lueker et al. does not teach to screw the access points into incandescent bulk socket. White et al. teaches in FIG. 3A the screwing of a network module into an incandescent bulk socket. One of ordinary skill in the art would have been motivated to combine the teaching of White et al. with the communication system of Lueker et al. because by screwing into the bulk socket the module is connected to the powerline and mounted in a position for wireless communication. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to screw the access point module into an incandescent bulk socket, as taught by White et al., in the communication system of Lueker et al. because by screwing into the bulk socket the module is connected to the powerline and mounted in a position for wireless communication.

11. Claims 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lueker et al. (U.S. Patent 6,130,896) in view of Hämmerling et al. (U.S. Patent 4,443,786).

Lueker et al. has been discussed above in regard to claims 17-18, 29, 33-34 and 37. The difference between Lueker et al. and the claimed invention is that the communication terminal of

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Lueker et al. does not operate at a frequency greater than 10 GHz or 100 GHz. However, Lueker et al. suggests that untethered device may communicate via optical signals (see col. 2, line 52). Hämmerling et al. teaches in FIG. 1 that optical (infrared) carrier can be used for the wireless link. One of ordinary skill in the art would have been motivated to combine the teaching of Hämmerling et al. with the communication system of Lueker et al. because optical carrier provides wide bandwidth. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use optical carrier for the wireless link, as taught by Hämmerling et al., in the communication system of Lueker et al. because optical carrier provides wide bandwidth.

Response to Arguments

12. Applicant's arguments with respect to claims 19-24 and 30 have been considered but are moot in view of the new ground(s) of rejection.

13. Applicant's arguments with respect to claims 17-18, 25-29 and 31-38 have been fully considered but they are not persuasive.

The Applicant argues that Lueker et al. does not teach broadband communication. The Examiner disagrees. Lueker et al. teaches in FIG. 2 a physical layer circuitry 78 for interfacing with the powerline. Lueker et al. teaches in col. 3, lines 49-51 to use AN1000 chipset of Adaptive Networks for the physical layer circuitry 78. The AN1000 chipset supports 100 kbps data communication as illustrated by Strassberg (Dan Strassberg, "Powerline Communication: Wireless Technology", EDN, June 6, 1996) (for example, see page 3, last paragraph). According to *Engineering and Operations in the Bell System* ("Engineering and Operations in the Bell System", Second Edition, Bell Telephone Laboratories, 1983, p. 782), broadband is defined as a

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bandwidth wider than that required for transmitting voice signals, for example, 48 KHz, 240 KHz. Therefore, Lueker et al. does teach broadband and the Applicant's argument that Lueker et al. does not teach broadband communication is not persuasive.

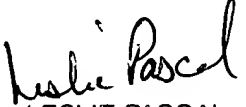
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 703 305-4341. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

skl


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PRIMARY EXAMINER